ing imatinib. **METHODS:** A retrospective study spanning July 2004-December 2011 analyzed data from 3 large integrated claims databases. Patients with a GIST-related ICD-9-CM code (151.0-154.0, 158.0, 159.0, 159.8, 159.9, 171.0, 171.4-171.9, 239.0) receiving imatinib were eligible if they (1) had a minimum eligibility of 6 months prior and 12 months following their first GIST diagnosis and (2) no previous diagnosis of cancer. Patients were divided into 2 cohorts: surgical (S) and non-surgical (NS). ST treatment patterns and corresponding GIST-related average monthly costs were evaluated. **RESULTS:** There were 57 (24 S, 33 NS), 98 (62 S, 36 NS), and 276 (156 S, 120 NS) patients in each of the 3 databases meeting all inclusion criteria, respectively. Average monthly cost of first-line therapy ranged from $26,465 to $78,081, with variation being driven by length of treatment. 42%-56% of NS and 41%-58% of S patients received second-line therapy, costing an average of $3,197-$5,334 per month. The majority of patients in each database received imatinib mono- or combination therapy as second-line treatment (60%-74% NS; 74%-86% S). Third-line therapy was received by 13%-33% of NS and 19%-30% of S patients, with an average cost per month ranging from $2,354 to $30,993. Imatinib was also received third-line by the majority of the patients in 2 databases (59%-67% NS, 60-75% S); sunitinib was most commonly utilized (43% NS, 58% S) in the third database. **CONCLUSIONS:** Over half of all patients receiving imatinib undergo surgery. Among both S and NS patients, second-line therapy for GIST was dominated by imatinib, while third-line therapy was dominated by imatinib or sunitinib.

PCN82

HOSPITAL COSTS OF ADVERSE EVENTS IN PATIENTS WITH METASTATIC MELANOMA

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OBJECTIVES: This study aimed to elucidate the hospitalization costs of adverse events (AEs) commonly associated with treatments for metastatic melanoma. **METHODS:** Based on current drug labels and published clinical studies for the treatments of metastatic melanoma, 23 serious adverse events were identified. Length of stay (days) and hospitalization costs (2013 US $) for these 23 events (identified by primary discharge diagnoses) were examined using a large national claims database, in which patients with metastatic melanoma were identified from July 2004 to November 2012. All analyses are presented descriptively. **RESULTS:** There were 2998 patients with metastatic melanoma: most were male (59.5%) and the mean age was 55.8 years old. Hospitalizations due to acute myocardial infarction and sepsis incurred the longest median length of stay (9 and 6 days, respectively), followed by acidosis (5.5 days), acute kidney failure, pneumonitis, neuropathy, thrombocytopenia, and oliguria/anuria (all had 5 days). The highest inpatient cost per event was for acute myocardial infarction (mean $45,971 and median $53,747), followed by sepsis ($34,351 and $22,838), coma ($30,943 and $23,149), acute kidney failure ($30,485 and $19,972), neuropathy ($28,977 and $12,034), and pneumonitis ($27,669 and $21,011). Colitis/diarrhea, cutaneous squamous cell carcinoma, thrombocytopenia, hyponatremia, oliguria/anuria, hypertension, anemia, and elevated liver enzymes were associated with mean costs per hospitalization ranging from $26,234 to $18,676. In contrast, the lower inpatient cost per event was for cellulitis (mean $16,828 and median $12,045), fever ($15,078 and $13,650), rash ($14,432 and $12,086), and nausea ($13,715 and $10,892). **CONCLUSIONS:** Hospital costs for the management of adverse events vary greatly. This study provides source data for economic evaluation of treatments for metastatic melanoma.

PCN84

HEALTH INSURER BURDEN OF PATIENT RECALL FOLLOWING BREAST CANCER SCREENING MAMMOGRAPHY

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OBJECTIVES: A high percentage of patients recalled after screening mammography do not have cancer. The goal of this study is to describe the prevalence and cost to health plans of patient recall in the 6 months following screening mammography. **METHODS:** The *Truven Health MarketScan Commercial and Medicare Supplemental Databases* were used to identify women aged 40-75 years undergoing screening mammography (index event) in 2010-2012. Women were required to have 12 months pre- and 6 months post-index continuous enrollment. Women with mammography or a breast cancer diagnosis in the 12 month pre-index period were excluded. Recall was defined as receipt of a second breast-related imaging procedure, coinciding with an abnormal mammogram diagnosis code or a breast-related diagnosis in the 6 months following the index screen. Payer cost per recall (2012 US$) was the sum of breast-related imaging procedures and associated visit costs in the 6 months post-index, excluding patient payments. Breast cancer treatment costs were not included in recall costs. **RESULTS:** Of the 1,553,044 women who met the study inclusion criteria, 246,233 (15.9%) had an abnormal mammogram or related diagnosis code and had a subsequent imaging procedure in the 6 months post-index. The average cost per patient recalled was $1,082 in the 6 months following screening mammography. The majority of recalls included diagnostic mammography (71.8%) or ultrasound (51.9%), which accounted for 12% and 9% of recall costs, respectively. Office visits and pathology services accounted for 42% of recall costs. Biopsy was performed in 19.3% of recalled patients and accounted for 27% of recall costs. MRI, fine needle aspiration, and ductogram accounted for <5% of recall costs. **CONCLUSIONS:** Approximately one-in-six women undergoing screening mammography were recalled for further imaging within 6 months, with an average cost to health plans of $1,082 per patient. Improving breast cancer screening with a more accurate mammogram may significantly reduce payer costs.

PCN85

A COST-EFFECTIVENESS ANALYSIS OF FIRST LINE INDUCTION AND MAINTENANCE TREATMENT SEQUENCES IN NON-SQUAMOUS NON-SMALL CELL LUNG CANCER (NSCLC) IN THE UNITED STATES

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OBJECTIVES: Clinicians treating patients with advanced NSCLC have a range of options for care. The objective of this study was to develop a cost-effectiveness (CE) model to compare induction-maintenance sequences approved for use in the U.S. for the treatment of advanced non-squamous NSCLC given the absence of direct head-to-head trials. **METHODS:** The modelled regimens that were licensed in the United States included pemetrexed+cisplatin followed by (→) pemetrexed; pemetrexed+cisplatin→best supportive care (BSC); gemcitabine+cisplatin→BSC; gemcitabine+cisplatin→erlotinib; gemcitabine+cisplatin→pemetrexed; and pac litaxel+carboplatin+bevacizumab→bevacizumab. Treatment effects of induction and maintenance on survival endpoints were obtained using data from a previous network meta-analysis. Decision analytic modelling was used to synthesise the treatment effect and baseline risk estimates for the induction and maintenance treatment sequences. The CE model was structured using an area-under-the-curve approach, costs and benefits were discounted at 3.5% per annum, and probabilistic and one-way sensitivity analyses were conducted to evaluate model parameters. **RESULTS:** All active maintenance therapy-containing regimens, with the exception of gemcitabine+cisplatin→erlotinib, were more costly than induction-only regimens. Gemcitabine+cisplatin→BSC was the baseline comparator and established the cost effective threshold range of $0 to $121,425. The respective incremental costs per life year (LY) were $121,425, $148,994, and $191,270 for gemcitabine+cisplatin→erlotinib versus gemcitabine+cisplatin→BSC, pemetrexed+cisplatin→BSC versus gemcitabine+cisplatin→erlotinib, and pemetrexed+cisplatin→pemetrexed versus pemetrexed+cisplatin→BSC. Other regimens were dominated (paclitaxel+carboplatin+bevacizumab→bevacizumab) or extendedly dominated (gemcitabine+cisplatin→pemetrexed). Sensitivity analyses demonstrated that efficacy data and the method of extrapolating survival had the greatest impact on the cost-effectiveness results. For non-dominated regimens, the cost-effectiveness acceptability frontier showed that gemcitabine+cisplatin→BSC, pemetrexed+cisplatin→BSC, and pemetrexed+cisplatin→pemetrexed had the greatest probabilities of cost-effectiveness over the following threshold ranges: $0-$124,000/LY; $124,000-$220,000/LY; and above $220,000/LY, respectively. **CONCLUSIONS:** Depending on the specific cost-effectiveness threshold used by a decision maker, the cost-effective treatment sequence will be gemcitabine+cisplatin→BSC, gemcitabine+cisplatin→erlotinib, pemetrexed+cisplatin→BSC, or pemetrexed+cisplatin→pemetrexed. Paclitaxel+carboplatin+bevacizumab→bevacizumab and gemcitabine+cisplatin→pemetrexed were dominated or extendedly dominated and thus not cost-effective when ranking these comparators.

PCN86

ASSESSING THE POTENTIAL COST-EFFECTIVENESS OF ALTERNATIVE METHODS TO SCREEN FOR CERVICAL CANCER AMONG HIV-POSITIVE WOMEN IN KENYA

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OBJECTIVES: As antiretroviral therapy is scaled up in Africa, HIV-positive women are increasingly likely to die from cervical cancer, a leading cause of cancer death. Effective screens for cervical cancer exist including Papanicolaou smear (Pap), visual inspection of the cervix with acetic acid (VIA), and human papillomavirus testing (HPV). Our objective was to prospectively assess cost-effectiveness of cervical cancer screening methods for HIV-positive women. **METHODS:** The analysis was based on data from 500 HIV-positive women who underwent VIA, Pap, HPV, and gold-standard colposcopy-directed biopsy in Nairobi, Kenya. A Markov model projected life expectancy and costs for six cervical screening strategies: Pap; VIA; HPV; testing positive for both VIA+Pap, Pap+HPV, VIA+HPV. Cost-effectiveness was calculated for overall population and by CD4 count. Strategies were compared using an incremental cost-effectiveness ratio (ICER)—the additional cost per life year (LY) gained. Impact of parameter uncertainty was addressed using univariate and probabilistic multivariate sensitivity analysis. **RESULTS:** VIA had lowest cost and highest life expectancy ($331, 17.2 LYs), followed by HPV ($569, 17.1 LYs), Pap ($622, 17.1 LYs), HPV+Pap ($836, 17.0 LYs), VIA+HPV ($857, 17.0 LYs), and VIA+Pap ($897, 17.0 LYs). CD4 level did not affect this rank order, though VIA at low CD4 showed the lowest cost ($111, 15.3 LY), while VIA at high CD4 produced most health gains ($285, 19.9 LY) [ICER: $37/LY]. Costs were sensitive to prevalence of cancer, sensitivity, age, and cost of cancer. Life expectancy was sensitive to age at screening. Results were robust to probabilistic sensitivity analysis. **CONCLUSIONS:** VIA is projected to be the most cost-effective screening strategy for cervical cancer among HIV-positive women. This is due to its high sensitivity, low screening cost, low risk treatment, and high cervical cancer cost. Screening women with high CD4 is particularly cost-effective. VIA should be implemented among HIV-positive women in low-income settings.

PCN87

COST-EFFECTIVENESS ANALYSIS OF ABIRATERONE AND SIPULEUCEL-T IN METASTATIC CASTRATION-RESISTANT PROSTATE CANCER

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OBJECTIVES: 10-20% of patients diagnosed with prostate cancer progress to metastatic castration-resistant prostate cancer (mCRPC). Recently, four novel therapies have been introduced for the treatment of mCRPC; of these, abiraterone and sipuleucel-T have been studied in the asymptomatic, pre-docetaxel population. Both have shown clinical benefits compared to placebo. This study evaluated the cost-effectiveness of abiraterone acetate and sipuleucel-T compared to prednisone in asymptomatic, pre-docetaxel mCRPC from a US societal perspective. **METHODS:** A Markov model was constructed to simulate stable disease, progressed disease, and death. Survival and event rates were derived from published clinical trial data. Costs were derived from the literature and government reimbursement schedules. Utilities were derived from the literature. Outcomes were measured as average cost-effectiveness ratios (ACER), incremental cost-effectiveness ratios (ICER), and net monetary benefits (NMB). One-way and probabilistic sensitivity analyses were